11. (thrice amended) A method for muting expression of an endogenous gene in a cultured population of animal cells, the method comprising the steps of:

(a) identifying a muting nucleic acid composition having a sequence that is homologous to a sequence in the endogenous gene, the nucleic acid composition being double stranded; and

(b) delivering the muting nucleic acid into the population of cells; and

(c) muting expression of the endogenous gene at levels of transcription and post-transcription in the population as a whole, wherein such muting is independent of integration, expression, or transcription of the delivered nucleic acid.

14. (once amended) A method according to claim 11, wherein the nucleic acid is DNA, further comprising the step of engineering the DNA into a recombinant vector before the delivering step.

17. (Thrice amended) A method according to claim 11, wherein the muting nucleic acid composition is homologous to an endogenous sequence comprising a portion of the endogenous gene selected from at least one of the group of: a 5' untranscribed portion, a transcribed portion, a 3'untranslated portion, a 3' untranscribed portion, and a portion that overlaps adjacent ends of at least two portions of the endogenous gene.

23. (Once Amended) A method according to claim 22, wherein the muting nucleic acid comprises a sequence that is homologous to an endogenous sequence located at the 3'-portion of the gene, said endogenous sequence including a 3' untranscribed portion, a 3'-untranslated portion, and a 3' end coding portion.

57. (new) A method for muting expression of an endogenous gene in a cultured population of animal cells, the method comprising:

(a) identifying a muting nucleic acid composition having a sequence that is homologous to a sequence in the endogenous gene, wherein the gene is one of a collagen, tumor necrosis factor (TNF), *tat*, and an immunoglobulin gene, the nucleic acid being double stranded; and

(b) delivering the muting nucleic acid into the population of cells; and

(c) muting expression of the endogenous gene at the levels of transcription and post-transcription in the population as a whole, wherein such muting is independent of integration, expression, or transcription of the delivered nucleic acid.

58. (new) A method according to claim 57, wherein the endogenous gene is a type I collagen.

59. (new) A method according to claim 58, wherein the endogenous gene is pro-α1(I) collagen.

60. (new) A method according to claim 57, wherein the cultured population of animals are rodent cells.

61. (new) A method according to claim 59, wherein the muting nucleic acid sequence is homologous to an endogenous sequence comprising a portion of the pro-α1(I) collagen gene selected from at least one of the group of: a 5'-untranscribed portion, a transcribed portion, a 3'-untranslated portion, a 3'-untranscribed portion, and a portion that overlaps adjacent ends of at least two portions of the pro-α1(I) collagen gene.

62. (new) A method according to claim 59, wherein the muting nucleic acid comprises a sequence homologous to an endogenous sequence located in the 5'-portion of the pro-α1(I) collagen gene.